

REMARKS

Reconsideration and allowance in view of the following Remarks is earnestly requested. Claims 1-3, 6, 8, 10, 13, 18, 21-23, 25-26, 32, 34-35, 38, 43-44 and 46 are currently pending.

In the Office Action, claims 1-3, 6, 10, 13, 18, 21-23, 25-26, 34-35, 38, 43, and 46 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,627,829 to Gleeson et al. Applicant has amended independent 1, 21 and 25 to further define the invention. Applicant respectfully disagrees that Gleeson anticipates the claims as presented and therefore traverses the rejection. According to the Office Action, the claims failed to show how the agent communication device breaks up the end-to-end communication between the client communication device and the destination. Applicant has amended claims 1, 21 and 25 to clarify this point. It should be noted that the terminology used for the client communication device and agent communication device are not the same in claims 1, 21 and 25. In claim 1, the agent communication device is identified as the first communication device and the client communication device is identified as the second communication device. In claim 21, the agent communication device is the second communication device and the client communication device is identified as the first communication device. In claim 25, the agent communication device is identified as the communication device and the client communication device is identified as the different communication device. In this response, applicants use the terms client communication device, agent communication device and client for the cited terms for the discussion of both the present invention and Gleason.

As stated earlier, the present invention is directed to a method and apparatus of reducing the overhead of the wireless link by the elimination on one side of the wireless link of protocol headers from the wireless link. Applicants achieve this by operating in the socket abstraction layer and removing socket information contained in that layer. An agent communication device, such as in infrastructure device, receives a message in the socket abstraction layer containing destination information for the message but not

containing information identifying the client communication device, such as a mobile subscriber, which originates the message. That message is translated into a connection request, which identifies the client communication device, and the connection request is routed to the destination. A header is generated at the agent communication device in the socket abstraction layer that uses the missing socket information that identifies the client communication device. The virtual connection is created while removing information including destination information from the header. This information is removed as it is no longer needed to make the connection with the destination. This information is not replaced by any other information and therefore reduces the size of the packet and operates in the socket abstraction layer.

Gleeson discloses using a transport protocol leaving the full standard protocol layers left unmodified and still resident in the two endnodes performing the communication. Gleeson achieves its objectives by compressing the transport and network protocol layer headers through the removal of redundant or static information found within those headers.

Gleeson discloses traditional compression techniques. Gleeson does not discuss removing information in the socket abstraction layer as required by independent claims 1, 21 and 25. Instead of using traditional compression techniques, the present invention operates in the socket abstraction layer by removing information not needed to communicate between an agent communication device and a client communication device and the client communication device and a destination while maintaining the connection between the agent communication device and the destination. In other words, the claimed invention breaks up the end-to-end communication discussed in Gleeson into two separate connections.

In the Response to Arguments section of the Office Action, the Examiner states how both the present invention and Gleason require the removal of information from the socket and that Gleason uses different terminology. While Gleason does disclose compression techniques and therefore the removal of information, Gleason does not

discuss the techniques in terms of the socket abstraction layer and in terms of the agent communication device. The socket abstraction layer is a part of the protocol stack and is not discussed by Gleason. See Figures 5 and 6. It is respectfully submitted that the socket information of Gleason is not the socket abstraction layer of the present invention. Gleason does not define the socket information. Nonetheless, the removal of information in Gleason is done in the end devices, e.g. the client communication device and the destination. Gleason does not focus on removing information between these devices, i.e. on a infrastructure device, such as an agent communication device, that operates between.

According to the Office Action, the claims failed to show how the agent communication device breaks up the end-to-end communication between the client communication device and the destination. As stated above, the claims have clarified and the limitations explained above. Regardless of the lexicon used in the claim, the present invention is directed to the operation of the agent communication device and how it takes a receives a message in the socket abstraction layer to connect the client communication device, which is the origination of the communication path, to a destination of the communication path using destination information regarding the destination without identifying the client communication device. That message, which does not identify the client communication device, is translated into a message that does identify the client communication message and then is routed to the destination. The agent communication device also receives a data packet from the client communication device that does not include the information identifying the destination and then generates a header that identifies the client communication device and uses the header to modify the data packet that is forwarded to the destination. In other words, the present invention focuses on the agent communication device that is between the client communication device requesting a connection with a destination and the destination.

Turning to the sections of Gleason cited against the claims, Gleason does not focus on a device within the infrastructure of the communication system. Gleason does, however, discuss a host computer within a wireless wide area network to which all nodes communicate for routing. See column 17, lines 27-47. Such a host computer operates for

routing information packet transmission between the client node and the server node. Gleason does not provide details or information on how the host computer operates. There is no details on how the host computer receives the message in the socket abstraction layer, translates the message, establishes the virtual connection, receives a data packet, or generates a header to create the modified data packet, which are all required by the claim. Gleason is focused on a data compression technique that operates at the client communication device and the destination. As described here, the present invention focuses on a data reduction technique that operates at an agent communication device that is between the communication device and the destination.

According to the Office Action, column 15, line 62 to column 16, line 23 teaches that the socket information comprises destination information without identifying the client communication device. Applicant traverses this reading Gleason. In particular, this section of Gleason discusses header field reduction and how certain header information can be deleted after a connection is made between the client communication device and the destination. In the claims, however, the socket information is related to the message that requests the establishment between the client communication device and the destination. This cited section of Gleason relates to the deletion of information after the connection is made not in the process of making the connection and is therefore not teaching or suggesting missing data from the request of the connection. As stated, the claims focus on the operation at the agent communication device.

Figure 16 of Gleason is cited for the receiving the data packet having the payload, generating a header, adding the adder and routing the modified data packet to the destination. Figure 16 and the accompanying text, does not describe how the header is generated at the agent communication device. According the Gleason, the header that is used for the modified data packet is generated at the client communication device. Gleason does not provide the header at the agent communication device. To the extent that Figure 16 discusses the function of an agent communication device, Gleason discusses how this device provides retransmissions on a given interval to ensure that the destination receives data sent by the client communication device.

Based on the differences between the subject matter claimed in independent claims 1, 21, and 25, applicants respectfully submit that these claims are not anticipated by Gleeson and request that the rejection under Section 102(b) be withdrawn. In addition, applicants request that the Section 102(b) rejections to pending claims 2-3, 6, 10, 13, 18, 22-23, 26, 34-35, 38, 43 and 46 be withdrawn as these claims depend on the amended independent claims.

The Examiner also rejected claims 8, 32 and 44 under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of United States Patent Application No. 2002/0091860 to Kalliokulju. As stated above, applicants have amended independent claims 1 and 25. The Examiner states that Kalliokulju packet convergence protocol (PDCP) context. Kalliokulju does not disclose making a connection as claimed by applicants. In particular, Kalliokulju does not focus on the operation of an agent communication device in making and maintaining the connection between a client communication device and a destination. Kalliokulju does not disclose having headers with missing information concerning the destination of the desired connection. Accordingly, applicants respectfully submit that the combination of Gleeson and Kalliokulju does not teach or suggest the present invention. Applicants respectfully request that the rejection under Section 103(a) be withdrawn.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the specification pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Please charge any fees associated herewith, including extension of time fees, to
50-2117.

Respectfully submitted,
Battin, Robert et al.

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